



07-06-07

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U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			
<b>PETITION TO REVIVE AN UNINTENTIONALLY ABANDONED PATENT APPLICATION UNDER 37 C.F.R. § 1.137(b)</b>		Docket Number: <b>2345/152</b>	
Application Number <b>09/807,181</b>	Filing Date <b>June 15, 2001</b>	Examiner <b>Thanhnga B. Truong</b>	Art Unit <b>2135</b>
Title <b>PROCESS FOR ESTABLISHING A COMMON CRYPTOGRAPHIC KEY FOR N SUBSCRIBERS</b>			

**Mail Stop Petition**  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**PETITION TO REVIVE AN UNINTENTIONALLY ABANDONED PATENT  
APPLICATION UNDER 37 C.F.R. § 1.137(b)**

Dear Sir:

Applicant hereby petitions to revive the above-identified patent application under 37 C.F.R. § 1.137(b). It is the understanding of the undersigned that this application became abandoned for failure to respond to an Advisory Action having a mail date of September 15, 2006 [sic]. A Notice of Abandonment having mail date of April 2, 2007 has been issued.

Applicant respectfully submits that Applicant did properly submit a timely-filed response, with the requisite extension fee and request to the Advisory Action dated September 15, 2006, on March 28, 2007. Attached hereto please find Applicant's response (RCE with Amendment submission and extension request and payment) filed on March 28, 2007. Also attached hereto please find Applicant's Notice of Appeal and USPTO-stamped postcard indicating a receipt date of August 28, 2006.

I did not make any statement that this application was to be abandoned as I understand the Applicant wishes that this application continued to remain alive in prosecution and issue as soon as possible into a patent. The Notice of

07/07/2007 RECEIVED 02082004 110600 09007181  
01 FC:1453 1500.00 DA

Abandonment ambiguously indicates that a "telephone call to the Attorney of record was made on March 28, 2006 to confirm the abandonment." First, no confirmation was actually made with our office. Further, we note that the Examiner's statement does not indicate whether the abandonment was "confirmed" or if a voicemail was left by the Examiner "requesting confirmation." Second, the Examiner's statement refers to a communication made on March 28, 2006 – which is *before* the Advisory Action of September 25, 2006 was mailed and *before* the current-named Examiner was assigned to this application. Third, no name is provided for "Attorney of record."

There was no delay in filing the required reply from the due date for the reply until the filing of this petition; and, if a delay is determined, then Applicant respectfully submits that the entire delay in filing the required reply from the due date for the reply until the filing of this petition was unintentional.

A favorable decision on this Petition is respectfully requested.

Please charge the amount of \$1,500.00 for payment of the fee under 37 C.F.R. 1.17(m) for filing this Petition to Revive under 37 C.F.R. §1.137(b) to Deposit Account No. 11-0600.

The Commissioner is hereby authorized to charge any additional fees and/or to credit any overpayment in connection with these papers transmitted herewith, to Deposit Account No. 11-0600. **Since the error in this matter was solely due to an error by the USPTO, Applicant respectfully requests a refund of its petition fee should the USPTO agree with Applicant regarding the source of error.** A copy of this communication is enclosed for charging and/or crediting purposes.

Dated: July 5, 2007

Respectfully submitted,

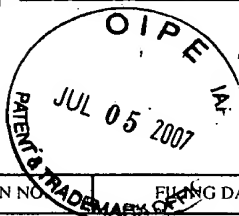
By: Linda Shudy LeComte  
Linda Shudy LeComte  
(Reg. No. 47,084)

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,181	06/15/2001	Joerg Schwenk	2345/152	3107

26646 7590 04/02/2007  
KENYON & KENYON LLP  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

TRUONG, THANHNGA B

ART UNIT	PAPER NUMBER
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2135

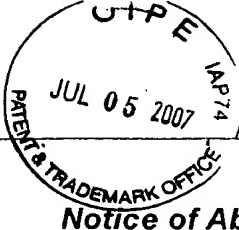
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04/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

Express Mail No. EV 839713035 US



**Notice of Abandonment**

Application No.

09/807,181

Examiner

Thanhnga B. Truong

Applicant(s)

SCHWENK, JOERG

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 15 September 2006.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.  
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☐ A reply was received on \_\_\_\_\_ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - (d) ☒ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☒ The reason(s) below:

A telephone call to the Attorney of record was made on March 28, 2006 to confirm the abandonment.

*Thanhnga B. Truong*  
TBT AU2135

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.



**PROCESS FOR ESTABLISHING A COMMON CRYPTOGRAPHIC KEY FOR N SUBSCRIBERS**  
**Client: 02345 Matter: 152 Application No: 09/807181 (P34392 USW 0 175625 PC)**

APR 17 2010



Case No. 2045/152  
Ser. No. 09/807181

Atty. US  
~~File~~ Date March 28, 2007

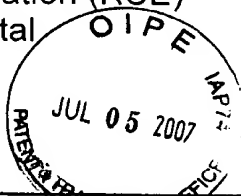
The Impressed Mail Room date stamp acknowledges receipt of the date indicated of:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Application (RCE)      | <input checked="" type="checkbox"/> Extension Request (Smos) |
| <input checked="" type="checkbox"/> Amendment (Submission) | <input type="checkbox"/> Priority Document                   |
| <input type="checkbox"/> Assignment                        | <input type="checkbox"/> Issue Fee                           |
| <input type="checkbox"/> Notice of Appeal                  | <input type="checkbox"/> Declaration                         |
| <input type="checkbox"/> Prior Art Statement               | <input type="checkbox"/> Small Entity                        |
| <input type="checkbox"/> Appeal Brief                      | <input checked="" type="checkbox"/> Dep Acct # 11-0600       |

Express Mail No. EV 839 713035 US

Request  
For  
Continued Examination (RCE)  
Transmittal

Address to:  
Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450



Application Number	09/807,181
Filing Date	June 15, 2001
First Named Inventor	Joerg SCHWENK
Art Unit	2135
Examiner Name	Linh L.D. Son
Attorney Docket Number	2345/152

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. **Submission required under 37 C.F.R. 1.114** Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

- a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on \_\_\_\_\_  
ii. ☐ Other \_\_\_\_\_

- b. ☒ Enclosed

- i. ☒ Amendment/Reply  
ii. ☐ Affidavit(s)/Declaration(s)  
iii. ☐ Information Disclosure Statement (IDS)  
iv. ☐ Other \_\_\_\_\_

2. **Miscellaneous**

- a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. 1.103(c) for a period of \_\_\_\_\_ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. 1.17(i) required)

- b. ☒ Other Request for a five-month extension of time to respond to the Patent Office.

3. **Fees** The RCE fee under 37 C.F.R. 1.17(e) is required by 37 C.F.R. 1.114 when the RCE is filed.

- a. ☒ The Director is hereby authorized to charge the following fees, or credit any overpayments, to Deposit Account No. 11-0600. I have enclosed a duplicate copy of this sheet.

- i. ☒ RCE fee required under 37 C.F.R. 1.17(e)  
ii. ☒ Extension of time fee (37 C.F.R. 1.136 and 1.17)  
iii. ☒ Other The Director is hereby authorized, as appropriate and/or necessary, to charge payment of fees (including any additional extension fees) required, associated with this communication or arising during the pendency of this application, and/or to credit any overpayment, to the deposit account number 11-0600 of Kenyon & Kenyon LLP.

- b. ☐ Check in the amount of \$ \_\_\_\_\_ enclosed

- c. ☐ Payment by credit card (Form PTO-2038 enclosed)

**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED**

Signature		Date	March 28, 2007
Name (Print /Type)	Linda Shudy Lecomte	Registration No. (Attorney/Agent)	47,084

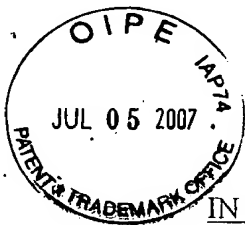
**CERTIFICATE OF MAILING OR TRANSMISSION**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature		Date	March 28, 2007
Name (Print /Type)	Linda Shudy Lecomte (Reg. No. 47,084)	Date	March 28, 2007

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



[2345/152]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Joerg SCHWENK  
Serial No. : 09/807,181  
Filed : June 15, 2001  
For : PROCESS FOR ESTABLISHING A COMMON  
CRYPTOGRAPHIC KEY FOR N SUBSCRIBERS

Art Unit : 2135  
Examiner : Linh L.D. Son

Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on  
Date: March 28, 2007  
Signature: Linda Shudy Lecomte  
Linda Shudy Lecomte (Reg. No. 47,084)

**AMENDMENT**

SIR:

In response to the Advisory Action dated September 19, 2006, and in response to the earlier Office Action dated February 22, 2006, please reconsider the above-identified application based on the following.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks** begin on page 5 of this paper.



## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

### LISTING OF CLAIMS:

1. (Canceled).

2. (Canceled).

3. (Canceled).

4. (Canceled).

5. (Currently Amended) A The process for secret transmission of a message by establishing a common cryptographic key for n subscribers using the Diffie-Hellman process, as recited in claim 4, further comprising:

\_\_\_\_\_ assigning the n subscribers respective leaves of a binary-structured tree which has a root, n leaves, is of depth  $\lceil \log_2 n \rceil$  and has treenodes;

\_\_\_\_\_ for each one of the n subscribers, generating a respective secret, the respective secret being assigned to the one of the n leaves to which the one of the n subscribers is assigned;  
and

\_\_\_\_\_ establishing secrets consecutively in a direction of the root of the tree for all k nodes of the tree starting from the n leaves of the tree across an entire hierarchy of the tree, wherein two already known secrets are combined using the Diffie-Hellman process to form a new common secret, the new common secret being allocated to a common node so that a common cryptographic key for all n subscribers is allocated to a last one of tree nodes, the last one of the tree nodes being the root of the tree;

\_\_\_\_\_ adding a new subscriber to the n subscribers of the tree so that there are n+1 subscribers of the tree, the adding step including:

\_\_\_\_\_ adding two new leaves as successors to a selected one of the n leaves of the tree so that the new tree has n+1 leaves and is of depth  $\lceil \log_2(n+1) \rceil$ ;

\_\_\_\_\_ assigning the one of the n subscribers to whom the selected one of the n leaves is assigned one of the two new leaves and assigning the new subscriber to another one of the two new leaves, the selected one of the n leaves becoming a common node for the two new leaves; and

\_\_\_\_\_ starting from the new leaves in a direction of the root of the tree, establishing new secrets only in those of the tree nodes which lie within a framework of the tree on a path from the two new leaves to the root of the tree.

6. (Canceled).

7. (New) A method of transmitting a message to a location, comprising:

- establishing a common cryptographic key for  $n$  subscribers using Diffie-Hellman process;
- encrypting the message with the common cryptographic key;
- transmitting the encrypted message to the location,
- wherein, the establishing the common cryptographic key includes:
  - assigning the  $n$  subscribers respective leaves of a binary-structured tree which has a root,  $n$  leaves, is of depth  $\lceil \log_2 n \rceil$  and has  $n$  nodes;
  - for each one of the  $n$  subscribers, generating a respective secret, the respective secret being assigned to the one of the  $n$  leaves to which the one of the  $n$  subscribers is assigned; and
  - establishing secrets consecutively in a direction of the root of the tree for all  $k$  nodes of the tree starting from the  $n$  leaves of the tree across an entire hierarchy of the tree, wherein two already known secrets are combined using the Diffie-Hellman process to form a new common secret, the new common secret being allocated to a common node so that a common cryptographic key for all  $n$  subscribers is allocated to a last one of tree nodes, the last one of the tree nodes being the root of the tree;
  - adding a new subscriber to the  $n$  subscribers of the tree so that there are  $n+1$  subscribers of the tree, the adding step including:
    - adding two new leaves as successors to a selected one of the  $n$  leaves of the tree so that the new tree has  $n+1$  leaves and is of depth  $\lceil \log_2(n+1) \rceil$ ;
    - assigning the one of the  $n$  subscribers to whom the selected one of the  $n$  leaves is assigned one of the two new leaves and assigning the new subscriber to another one of the two new leaves, the selected one of the  $n$  leaves becoming a common node for the two new leaves; and
    - starting from the new leaves in a direction of the root of the tree, establishing new secrets only in those of the tree nodes which lie within a framework of the tree on a path from the two new leaves to the root of the tree.

8. (New) The method as recited in claim 7, further comprising:

- excluding a selected one of the  $n$  subscribers from the tree, the excluding steps including:
  - removing a first one of the  $n$  leaves of the tree to which the selected one of the  $n$  subscribers is assigned;
  - removing a second one of the  $n$  leaves, the second one of the  $n$  leaves sharing a common node with the first one of the  $n$  leaves, the common node with the first one of the  $n$  leaves becoming a new leaf assigned to the one of the  $n$  subscribers to which the second one of the  $n$  leaves is assigned; and

starting from the new leaf of the tree in a direction of the root of the tree,  
establishing new secrets only in those of the tree nodes which lie within a framework of the  
tree on a path from the new leaf to the tree root.

### REMARKS

This Amendment is being filed along with a Request for Continued Examination (RCE).

Claims 4 and 6 are canceled. Applicant reserves the right to file those claims in a continuation application. Claim 5 has been amended. New claims 7 and 8 have been added. Support for the amendments and new claims can be found in the Specification and in the originally filed claims. No new matter has been added. Claims 5, 7, and 8, are now pending in the present application. Applicant respectfully requests reconsideration of the present application in view of this response.

In an earlier Office Action, claims 4 to 6 were rejected under 35 U.S.C. § 101 for purportedly lacking practical application in the technological arts. Claims 4 and 6 have been canceled. Applicant respectfully submits that claim 5 contains statutory patentable subject matter. According to guidelines published by the USPTO, if the invention produces a useful result, *i.e.*, the invention has a practical application in the technological arts, then it should not be rejected under 35 U.S.C. § 101. Claim 5 concerns a process for secret transmission of a message by establishing a common cryptographic key for  $n$  subscribers using the Diffie-Hellman process. As explained in the Specification, this process has a practical application in the technological arts in that it provides a process to guarantee the secrecy of messages which are to be transmitted exclusively to a number of subscribers via insecure communication channels. *See, e.g.*, Specification at page 1, lines 5-10. The present application also provides a process wherein a group key is established with the aid of a tree structure in such a manner so that even after the group key has been established, subscribers can be removed from or added to the key directory without great effort. Accordingly, claim 5 does recite statutory patentable subject matter and withdrawal of the rejection under 35 U.S.C. § 101 of claim 5 is respectfully requested.

Likewise, new claims 7 and 8 are believed allowable over 35 U.S.C. § 101.

CONCLUSION

In view of all of the above, it is believed that rejection under 35 U.S.C. § 101 of claim 5 has been overcome. Accordingly, it is respectfully submitted that claims 5, 7, and 8, are in a condition for allowance. It is therefore respectfully requested that any outstanding rejections be withdrawn, and that the present application issue as early as possible.

Respectfully submitted,

Dated March 23, 2007

**CUSTOMER NO. 26646**

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# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,181	06/15/2001	Joerg Schwenk	2345/152	3107
26646	7590	09/19/2006		
KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004			EXAMINER SON, LINH L D	
			ART UNIT 2135	PAPER NUMBER

DATE MAILED: 09/19/2006



Please find below and/or attached an Office communication concerning this application or proceeding.

Express Mail No. EV 839713035 US

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

09/807,181

Examiner

Linh LD Son

Applicant(s)

SCHWENK, JOERG

Art Unit

2135

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 22 August 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
- a) ☒ The period for reply expires 6 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_.
- Claim(s) objected to: \_\_\_\_\_.
- Claim(s) rejected: 5.
- Claim(s) withdrawn from consideration: \_\_\_\_\_.

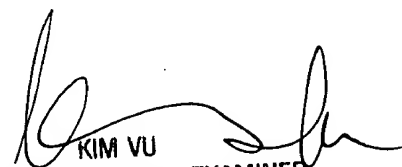
**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.

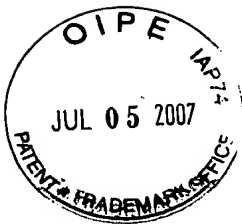
Continuation of 11. does NOT place the application in condition for allowance because: The amended claim 5 has not overcome 35 U.S.C 101 problem as rejection in the Final Office Action. The 35 U.S.C 101 rejection is maintained.

  
KIM VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100





**PROCESS FOR ESTABLISHING A COMMON CRYPTOGRAPHIC KEY FOR N SUBSCRIBERS**  
**Client: 02345 Matter: 152 Application No: 09/807181 (P34392 USW 0 155651 PC)**



P34392 US

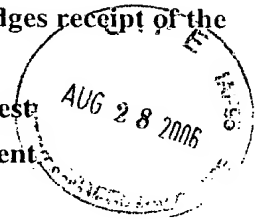
Case No. 2345/152  
Ser. No. 09/807,181

Atty. LMS  
Due Date 8/22/06

The Impressed Mail Room date stamp acknowledges receipt of the date indicated of:

- ☐ Application
- ☒ Amendment
- ☐ Assignment
- ☒ Notice of Appeal
- ☐ Prior Art Statement
- ☐ Appeal Brief

- ☒ Extension Request
- ☐ Priority Document
- ☐ Issue Fee
- ☐ Declaration
- ☐ Small Entity



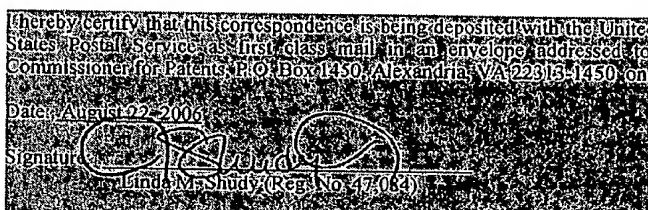
☒ Deposit Acct. 11-0000

Express Mail No. EV 839 713035 US

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			
NOTICE OF APPEAL, REQUEST FOR EXTENSION OF TIME PURSUANT TO 37 CFR 1.136(a), AND TRANSMITTAL OF RESPONSE		Docket Number 2345/152	
		JUL 05 2007 PATENT & TRADEMARK OFFICE	
Application Number 09/807,181	Filing Date June 15, 2001	Examiner Linh L D Son	Art Unit 2135
Title PROCESS FOR ESTABLISHING A COMMON CRYPTOGRAPHIC KEY FOR N SUBSCRIBERS		Applicant(s) Joerg Schwenk	

Address to:

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450



Applicant hereby appeals to the Board of Patent Appeals and Interferences from the decision of the Examiner in the Final Office Action dated February 22, 2006 finally rejecting claims 4 to 6. Applicant believes that the claim(s) should be allowed, and respectfully makes this appeal of the Examiner's rejection of those claim(s), specifically of pending claim 5.

This is also a Request pursuant to 37 C.F.R. 1.136(a) by which Applicant respectfully requests a three-month extension of time in which to respond to the Final Office Action so that the response time is extended from May 22, 2006, to August 22, 2006.

Applicant is filing herewith a Response in the present application for consideration by the Patent Office.

The Commissioner is hereby authorized to charge the 37 C.F.R. § 1.191 Notice of Appeal fee, which is believed to be \$500, and the 37 C.F.R. 1.136(a) three-month extension fee, which is believed to be \$1020, to the deposit account number 11-0600 of **Kenyon & Kenyon LLP**. The Commissioner is also authorized, as appropriate and/or necessary, to charge any additional fees, including any additional Rule 136(a) extension fees, or credit any excess fees to deposit account number 11-0600 of **Kenyon & Kenyon LLP**. Two duplicate copies of this paper are enclosed for those purposes.

Dated: Aug. 22, 2006

CUSTOMER NO. 26646

By:

[Signature] By: [Signature]  
Reg. No. 47084

Richard L. Mayer (Reg. No. 22,490)

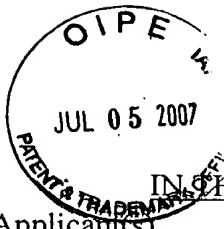
KENYON & KENYON LLP

One Broadway

New York, New York 10004

Tel. (212) 425-7200

Fax (212) 425-5288

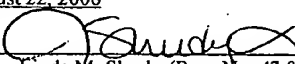


[2345/152]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Joerg SCHWENK  
Serial No. : 09/807,181  
Filed : June 15, 2001  
For : PROCESS FOR ESTABLISHING A COMMON  
CRYPTOGRAPHIC KEY FOR N SUBSCRIBERS  
  
Art Unit : 2135  
Examiner : Linh L.D. Son

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on  
Date: August 22, 2006  
Signature:   
Linda M. Shudy (Reg. No. 47,084)

**AMENDMENT**

SIR:

In response to the Office Action dated February 22, 2006, please reconsider the above-identified application based on the following.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks** begin on page 4 of this paper.

## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

### LISTING OF CLAIMS:

1. (Canceled).
2. (Canceled).
3. (Canceled).
4. (Canceled).
5. (Currently Amended) A The process for secret transmission of a message by establishing a common cryptographic key for n subscribers using the Diffie-Hellman process, as recited in claim 4, further comprising:
  - \_\_\_\_\_ assigning the n subscribers respective leaves of a binary-structured tree which has a root, n leaves, is of depth  $\lceil \log_2 n \rceil$  and has tree nodes;
  - \_\_\_\_\_ for each one of the n subscribers, generating a respective secret, the respective secret being assigned to the one of the n leaves to which the one of the n subscribers is assigned;
  - and
  - \_\_\_\_\_ establishing secrets consecutively in a direction of the root of the tree for all k nodes of the tree starting from the n leaves of the tree across an entire hierarchy of the tree, wherein two already known secrets are combined using the Diffie-Hellman process to form a new common secret, the new common secret being allocated to a common node so that a common cryptographic key for all n subscribers is allocated to a last one of tree nodes, the last one of the tree nodes being the root of the tree;
  - adding a new subscriber to the n subscribers of the tree so that there are n+1 subscribers of the tree, the adding step including:
    - adding two new leaves as successors to a selected one of the n leaves of the tree so that the new tree has n+1 leaves and is of depth  $\lceil \log_2(n+1) \rceil$ ;
    - assigning the one of the n subscribers to whom the selected one of the n leaves is assigned one of the two new leaves and assigning the new subscriber to another one of the two new leaves, the selected one of the n leaves becoming a common node for the two new leaves; and
    - starting from the new leaves in a direction of the root of the tree, establishing new secrets only in those of the tree nodes which lie within a framework of the tree on a path from the two new leaves to the root of the tree.

~~6. (Canceled).~~

### REMARKS

Claims 4 and 6 are canceled. Applicant reserves the right to file those claims in a continuation application. Claim 5 has been amended. No new matter has been added. Claim 5 is now pending in the present application. Applicant respectfully requests reconsideration of the present application in view of this response.

Applicant thanks the Examiner for noting that claim 5 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 5 has been rewritten in independent form above. No new matter has been added.

Claims 4 to 6 were rejected under 35 U.S.C. § 101 for purportedly lacking practical application in the technological arts. Claims 4 and 6 have been canceled. Applicant respectfully submits that claim 5 contains statutory patentable subject matter. According to guidelines published by the USPTO, if the invention produces a useful result, *i.e.*, the invention has a practical application in the technological arts, then it should not be rejected under 35 U.S.C. § 101. Claim 5 concerns a process for secret transmission of a message by establishing a common cryptographic key for  $n$  subscribers using the Diffie-Hellman process. As explained in the Specification, this process has a practical application in the technological arts in that it provides a process to guarantee the secrecy of messages which are to be transmitted exclusively to a number of subscribers via insecure communication channels. *See, e.g.*, Specification at page 1, lines 5-10. The present application also provides a process wherein a group key is established with the aid of a tree structure in such a manner so that even after the group key has been established, subscribers can be removed from or added to the key directory without great effort. Accordingly, claim 5 does recite statutory patentable subject matter and withdrawal of the rejection under 35 U.S.C. § 101 of claim 5 is respectfully requested.

CONCLUSION

In view of all of the above, it is believed that rejection under 35 U.S.C. § 101 of claim 5 has been overcome. Accordingly, it is respectfully submitted that claim 5 is in a condition for allowance. It is therefore respectfully requested that the rejections be reconsidered and withdrawn, and that the present application issue as early as possible.

Respectfully submitted,

By: C. J. Smith  
Reg. No. 47084

Dated: Aug 22, 2006

By: R. L. Mayer  
Richard L. Mayer (Reg. No. 22,490)  
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New York, New York 10004  
(212) 425-7200 (telephone)  
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**CUSTOMER NO. 26646**